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HOMOPTEROUS INSECTS
COLLECTED AT KOTOSHO (BOTEL TABAGO),
FORMOSA, BY MR. TADAO KANO

By

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(松 村 松 年)

In the summer of 1937, Mr. TADAO KANO collected numerous Homopterous insects at Kotosho (Botel Tobago), Formosa, which were mostly attracted by a lamp and sent to the author for identification. In this time, differing from those of the former collection*, most of them are smaller ones and some of them being attacked by a mould, as a whole, are not well preserved. The total number of species is 58, and 31 of them are new to science. In this paper 4 new genera are also described.

**A List of Homopterous Insects collected at Kotosho
(Botel Tabago), Formosa, by Mr. TADAO KANO in 1937**

FAM. ***JASSIDAE***

Subfam. ***Bythoscopinae***

1. *Macropsis diminuta* MATS. Formosa.

Subfam. ***Cicadellinae***

2. *Cicadella (Tettigonia) spectra* DIST. Formosa; China; India.

Subfam. ***Jassinae***

3. *Nirvana pallida* MELICH. Japan; Formosa; India.
4. *Parabolocratus concentricus* n. sp. Formosa.
5. *Scaphoideus kotoshonis* n. sp. Formosa.
*6. *Togacephalus* (n. g.) *distinctus* MELICH. India.
7. *T.* *botelensis* n. sp. Formosa.
8. *T.* *jamiensis* n. sp. Formosa.
9. *T.* *dorsalis* MOTSCH. Japan; Formosa; China; India.

*See Ins. Mats., Vol. XII, No. 4, pp. 147-153, 1938.

10. *Togacephalus formosiellus* n. sp. Formosa.
 11. *Deltocephalus kanoniellus* n. sp. Formosa.
 12. *Eutettix disciguttus* Wk. Japan; Formosa; China; India.
 13. *E. botelensis* n. sp. Formosa.
 *14. *Jamitettix* (n. g.) *kotonis* n. sp. Formosa.
 15. *Xestocephalus botelensis* n. sp. Formosa.
 16. *X. chibianus* n. sp. Formosa.
 17. *Nephrotettix apicalis* MOTSCH. Formosa; China; India.
 f. *cincticeps* UHL. Japan; Formosa; China.
 *18. *Pygotettix* (n. g.) *formosanus* n. sp. Formosa.
 19. *P. botelensis* n. sp. Formosa.
 20. *Paramesus lineaticollis* DIST. Formosa; India.
 21. *Athysanus albovenosus* MATS. Japan; Formosa.
 22. *A. kanoi* n. sp. Formosa.
 23. *A. jamiensis* n. sp. Formosa.
 24. *Jassus formosanus* MATS. Formosa.
 25. *Thamnotettix kotoshonis* n. sp. Formosa.
 26. *T. botelensis* n. sp. Formosa.
 27. *Cicadula fasciifrons* STÅL Cosmopolitan.
 28. *Balclutha botelensis* n. sp. Formosa.

Subfam. ***Typhlocybinae***

29. *Zygina botelana* n. sp. Formosa.
 30. *Z. kotoshonis* n. sp. Formosa.
 31. *Chlorita flavescens* F. Cosmopolitan.

FAM. ***CERCOPIDAE***Subfam. ***Aphrophorinae***

32. *Kanozata botelensis* KATO Formosa.

FAM. ***FULGORIDAE***Subfam. ***Issinae***

33. *Sarima pallizona* MATS. Formosa.
 34. *Tonga formosana* MATS. Formosa.

Subfam. ***Cixiinae***

35. *Brixiooides carinatus* KIRK. Formosa; China; India.
 36. *Kirbyana pagana* MELICH. Formosa.
 37. *Myndus kotoshonis* n. sp. Formosa.

Subfam. ***Tropiduchinae***

38. *Ossoides lineatus* BIERM. Japan; Formosa; India.

Subfam. ***Achilinae***

39. *Vekunta kotoshonis* n. sp. Formosa.
 40. *V. atripennis* n. sp. Formosa.
 41. *V. botelensis* n. sp. Formosa.
 42. *Ussana yanonis* MATS. Japan; Formosa.

Subfam. ***Derbinae***

43. *Nisia atrovenosa* LETH. Japan; Formosa; China; India.
 44. *Rhotana coccinea* n. sp. Formosa.

Subfam. ***Flatinae***

45. *Mimophantia kotoshonis* n. sp. Formosa.
 46. *Atracis kotoensis* n. sp. Formosa.

Subfam. ***Delphacinae***

47. *Bidis vittata* MATS. Okinawa; Formosa.
 48. *Liburnia oryzae* MATS. Japan; Formosa; India; The Philippines.
 49. *L. albolineata* MATS. Japan; Formosa; China; Singapore; India.
 50. *L. kotonis* n. sp. Formosa.
 51. *Sogata furcifera* HORV. Japan; Formosa; China; India; Europe.
 52. *S. jamiana* n. sp. Formosa.
 53. *Dicranotropis botelensis* n. sp. Formosa.
 54. *D. jamiensis* n. sp. Formosa.
 *55. *Jamiphax* (n. g.) *kotoshonis* n. sp. Formosa.
 56. *J. nigropunctata* MORSCH. Japan; Formosa; China; India.
 57. *Perkinsiella sinensis* KIRK. Formosa; China; Palau.
 58. *Stenocranus hopponis* MATS. Formosa.

Descriptions of new Genera and SpeciesFAM. ***JASSIDAE******Parabolocratus concentricus* n. sp.**

♂. Pale yellowish. Vertex nearly as long as the breadth between the eyes, in the middle with a rightangularly broken orange line; near the apex

of frons with a narrow transverse black line in parallel to the transitory ridge, which does not reach to the lateral sides; frons with no marking. Pronotum with 2 concentric parabolic orange lines. Mesonotum with 3 short orange lines. Tegmina somewhat longer than the abdomen, with each a broad orange line on the longitudinal veins, except the costal and apical veins which are nearly colourless. Abdomen beneath pale saffron yellow, with no marking. Tarsi with the claws black. Genital valve as long as the foregoing 3 segments, together acutely pointed towards the end; genital plates about $\frac{1}{2}$ protruding beyond the valve, with some spinous pale brownish hairs. Length, 5 mm. (incl. tegm.).

Hab.—Kotosho. One male specimen was collected.

This species somewhat resembles *P. lineatus* HORV. from Japan.

***Scaphoideus kotoshonis* n. sp.**

Pale testaceous. Vertex whitish gray, scarcely as long as broad between the eyes, in the middle with a broad transverse reddish band; along the transitory ridge to the frons with a narrow transverse black line. Frons white, with no marking. Pronotum as long as the vertex, in the middle at the anterior margin with a reddish spot. Mesonotum with 2 longitudinal short reddish lines, ending just before the transverse groove (in some specimens lacking these lines). Tegmina somewhat shorter than the abdomen, with the veins fuscous, in the discoidal and in the 2 central postdiscoidal cells with each a longitudinal short fuscous bar, near the base at one-third of the clavus with an oblique fuscous bar and near the apex with a small fuscous spot. Legs white, the posterior tibia at the bases of spines with fuscous spots, the tibial and metatarsal apices as well as the middle of tarsus black.

♂. Abdomen ochre-yellow, the genital valve and the plates white, the former somewhat longer than the foregoing 2 segments, together ending in an acute point and somewhat upturned, the plates protruding about $\frac{1}{2}$ beyond the valve, at the apex somewhat elongated, together enclosing a spindle-shaped space, at the apices sharply pointed and fuscous, decorated with long spinous brownish bristles.

♀. Abdomen whitish gray, the last ventral segment nearly as long as the foregoing 2 taken together, at the hind margin straight. Length, 5 mm (♂), 6 mm (♀) (incl. tegm.).

Hab.—Kotosho. 4 (2♂♂, 2♀♀) specimens were collected in the summer of 1937.

This species somewhat resembles *S. ornatus* MELICH. from East India.

***Togacephalus* (n. g.) *botelensis* n. sp.**

Testaceous. Vertex in the disk distinctly excavated, in the middle and on the sides with each a white stripe; at the transit to the frons white, with a small fuscous ring at the apex; ocellus fuscous, its periphery white. Frons brownish, towards the apex paler, on each side with a series of obliquely curved white lines, in the middle with a narrow paler longitudinal line; genae just below the eyes fuscous; clypeus at the apex and lorae at the borders infuscated. Tegmina subhyaline, at the costal region white, the veins broadly white, along the veins somewhat infuscated. Legs concolorous with the body, fuscously spotted and streaked, at the bases of the bristles along the hind tibia with each a fuscous point. Abdomen fuscous, at the hind margin of each segment white, at the venter pale brown.

♂. Genital valve nearly as long as the foregoing segment; genital plates about twice as long as the valve, near the base with 2 small fuscous spots, at the apices together forming a blunt cone, with no bristle.

♀. Abdomen at the venter brownish, in the middle paler, the last ventral segment somewhat longer than the foregoing, at the hind margin scarcely excavated, the pygophor fuscous, at the upper border testaceous, the ovipositor black, in the middle longitudinally paler. Length, 3 mm. (♂), 3.5 mm (♀) (incl. tegm.).

Hab.—Kotosho. 5 (2 ♂ ♂, 3 ♀ ♀) specimens were collected.

***Togacephalus* n. g.**

Differs from *Deltoccephalus* BURM. in the following points:

Vertex triangularly acutely produced, the disk distinctly concave. Face below the eyes semicircular, the frons about 1.5 times as long as the latitude between the eyes; clypeus in the same diameter throughout, about 1.5 times as long as the breadth; rostrum somewhat longer than the clypeus. Border of the gena to the eye rightangular; pronotum nearly as long as the vertex in the middle. Tegmina longer than the abdomen, with 2 medial cells; clavus with no cross vein.

Genotype—*Deltoccephalus distinctus* MELICH.

***Togacephalus formosiellus* n. sp.**

♀. Testaceous. Vertex acutangularly produced, with 2 broad longitudinal brownish stripes, which continue to the mesonotum in the same diameter; in the middle with a narrow longitudinal fuscous line, which does not reach to the apex. Face fuscous, at the transit to vertex with a transverse series of small white spots; ocelli within these spots being fuscous, and the central spot opens at the hind border; frons on each side with a series of transverse curved

testaceous stripes; clypeus at the sides and the base as well as a basal spot of the lora testaceous; pronotum with 2 more brownish stripes on each side; legs concolorous with the body, the hind tibia at the apex and the hind tarsal joints fuscous. Tegmina somewhat longer than the abdomen, brownish subhyaline, the veins white, at the sides more or less fuscous. Abdomen fuscous, on the lateral sides, at the venter, and at each hind margin testaceous; connexivum at each joint fuscous; the last ventral segment about as long as the foregoing, at the hind margin straight, in the middle with 2 fuscous spots; pygophor longer than the remainder of venter, having a longitudinal brownish fuscous stripe and brownish bristles; ovipositor at the sides fuscous. Length, 3.5 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen is in the collection.

This species somewhat resembles *T. distinctus* MELICH.

***Togacephalus jamiensis* n. sp.**

♀. Pale testaceous. Vertex acutely produced, about $\frac{1}{2}$ protruded beyond the eyes; in the middle with a short narrow fuscous line, which does not reach to the apex. Frons brownish on each side, with a series of obliquely situated broken paler lines. Pronotum with 4 longitudinal brownish lines; mesonotum at the lateral sides brownish spotted. Tegmina pale brownish, subhyaline; veins white, some of them bordered with fuscous. Legs concolorous with the body, at the bases of bristles to the hind tibiae fuscous. Abdomen at the last ventral segment in the middle scarcely incised, somewhat darker in colour; pygophor about as long as the remainder of venter, with brownish bristles near the apex; ovipositor fuscous. Length, 3.5 mm.

Hab.—Kotosho. One female specimen was collected.

This species comes near *Deltoccephalus tritici* MATS. from Japan.

***Deltoccephalus kanoniellus* n. sp.**

♀. Testaceous. Vertex scarcely as long as the latitude between the eyes, slightly rightangularly produced, near the hind margin on each side with a brownish spot; in the middle with a weak transverse brownish band; at the anterior margin paler, with a brownish marking; ocelli brownish. Frons with no transverse line in the middle, having a longitudinal paler line; antennal groove with fuscous spots. Pronotum as long as the vertex in the middle. Tegmina subhyaline, the veins white, the cells mostly tinged with brown; clavus with 2 white bars between the suture and the claval vein. Legs concolorous with the body, at the bases of bristles on the hind tibiae brownish, on both ends of the same femur with a brownish spot. Abdomen broadly brownish, at the

hind margin of each segment broadly white; at the venter concolorous with the body, the last segment as long as the foregoing, and at the middle of the hind margin fuscous; pygophor with a longitudinal brown stripe, at the basal half being much broader; ovipositor somewhat longer than the pygophor. Length, 3.5 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen was collected.

This species resembles *D. areatus* STÅL from Europe.

***Jamitettix* (n. g.) *kotonis* n. sp.**

Olivaceous brown, mottled with fuscous specks. Head at the apex with 2 transverse narrow fuscous lines between the ocelli, with fuscous specks. Frons whitish testaceous, a series of fuscous specks on each side running from the apex to the suture and diverging towards the clypeus. Clypeus at the apical half fuscous. Pronotum with numerous transverse wrinkles. Mesonotum on each side with an obscure fuscous spot. Tegmina subhyaline, suffused with brown, the veins brownish. Legs pale testaceous, the tibiae with each a longitudinal series of fuscous specks; claws fuscous. The last ventral segment of abdomen somewhat shorter than the 2 foregoing taken together, in the hind margin at the middle broadly excavated; pygophor as long as the remainder of venter, the ovipositor scarcely longer than the latter. Length, 8 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen was collected.

***Jamitettix* n. g.**

Closely allied to *Drabescus* STÅL, but differs from the latter as follows:

Fore tibia not sulcated above, the posterior margin not dilated. Vertex not concave, the anterior margin not ridged, between the ocelli transversely linearly grooved; frons flat, not concave. Tegmina smooth, with all the veins not granulated.

Genotype—*Jamitettix kotonis* MATS.

***Eutettix botelensis* n. sp.**

Closely allied to *E. disciguttus* Wk., but differs from it as follows:

♀. Vertex more obtuse at the anterior margin, nearly parallel with the hind margin; mesonotum in the middle with an obscure longitudinal brownish line, on each side being decorated with a small triangular black spot. Tegmina dark brown, with fine white reticulation, in the middle of costa with a large oblong transverse white patch, at the hind margin narrowly white, the white region becoming broader in the middle; near the apex at the costa with a large

hyaline patch, having 2 black specks in it. Legs testaceous, the femora fuscous, with fuscous spots; at the bases of spines on the hind tibiae spotted with brown. Abdomen at the venter suffron yellow, the last segment nearly as long as the 3 foregoing taken together, at the hind margin in the middle with a black spot; pygophor fuscous, with brownish bristles, the ovipositor brownish. Length, 4 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen was collected.

***Xestocephalus botelensis* n. sp.**

♀. Body not strewn with paler round or long dots. Face, pronotum and mesonotum with no marking. Tegmina with the veins somewhat darker in colour, compared with the ground colour, at the apices fuscous, with some obsolete white spots especially in the middle of corium and clavus, and with each a fuscous spot on the costal and hind margin near the apex. Pectus and legs testaceous; abdomen fuscous. The last ventral segment of abdomen as long as the 2 foregoing taken together; pygophor about 2.5 times as long as the last segment, with brownish bristles; Length, 3 mm. (incl. tegm.).

Hab.—Kotosho. Numerous female specimens were collected.

***Xestocephalus chibianus* n. sp.**

Allied to *X. guttatus* MOTSCH., but differs from it as follows:

♀. Body fuscous. Vertex marmorated with paler spots and at the hind margin with 2 longitudinal paler streaks. Face with no marking except a transverse paler band across the transitory border to the vertex. Pronotum near the anterior border with 2 paler specks and in the middle as well as at the hind margin with each a paler band. Mesonotum at the apical half paler, with 2 concolorous spots near the base; on both sides with each a quadrate black spot. Tegmina brownish, marmorated with oblong paler markings. Rostrum, pectus and legs testaceous. Abdomen black, the pygophor as long as the remainder of venter, the ovipositor at the base brownish. Length, 2 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen was collected.

This species is easily recognizable from *X. guttatus* MOTSCH. by a pale brownish pectus.

***Pygotettix* (n. g.) *formosanus* n. sp.**

♀. Ochraceous testaceous. Vertex in the middle between the eyes with a transverse bow-like fuscous fascia, broadest in the middle, both ends gradually becoming narrower towards the eyes; in the middle with an obsolete narrow

longitudinal fuscous line, on both sides with each an obsolete small fuscous ringlet. Frons pale brown, on each side with about 5 transverse brownish arcs. Pronotum in the middle with a transverse bow-like broken narrow fuscous band, at the hind half somewhat grayish in colour. Tegmina distinctly longer than the abdomen, hyaline, with an ochraceous tinge, the veins concolorous, being not conspicuous. Legs concolorous with the body, bristly hairs at the bases fuscous, the anterior femora with brownish hairs. Abdomen at the venter somewhat as long as the pygophor, the last segment nearly in the same length with the 3 foregoing taken together, at the hind margin straight, in the middle with a brownish spot; ovipositor about $\frac{1}{4}$ protruding beyond the apex of abdomen. Length, 5 mm.

Hab.—Kotosho. One female specimen was collected.

***Pygotettix* n. g.**

Closely allied to *Athysanus* BURM., but differs from the latter as follows:

Vertex longer than a half of the latitude between the eyes, the crown broadly conically produced, not parallel with the hind margin, being more strongly curved. Pygophor much longer than the venter, the ovipositor much protruding beyond the apex of abdomen.

Genotype—*Pygotettix formosanus* MATS.

***Pygotettix botelensis* n. sp.**

Closely allied to *P. formosanus* MATS., but differs from it in the following points:

♀. Body paler. Vertex with a fuscous band between the eyes, almost straight, scarcely broader at the middle, not entirely reaching to the eyes. Face concolorous with the other part of the body, the frons on each side with much more oblique fuscous arcs, at both ends becoming much shorter; in the middle with a longitudinal fuscous line; in the clypeus and near the lorae with each a small fuscous speck. Pronotum greenish, the middle band straight, broadly broken in the middle. Mesonotum grayish. Tegmina with the veins brownish except at the costal half. Abdomen pale suffron yellow, the pygophor long, with numerous bristly hairs, at the base being fuscous. Length, 5.5 mm.

Hab.—Kotosho. One female specimen is in the collection.

***Athysanus kanoi* n. sp.**

♂. In form and coloration this species much resembles *A. fusconervosus* MOTSCH., but the body is much smaller and in details it differs from the latter in the following points:

Black fascia between the eyes narrower, interrupted in the middle; ocelli surrounded with a fuscous ring, the posterior specks near the hind margin bar-like and situated obliquely, the facial marking obsolete, only a speck at the outside of lora black. Pronotum with 2 small fuscous spots. Mesonotum with a triangular black spot on each side. Tegmina subhyaline, the veins mostly brownish, those of the costal region being concolorous with the ground colour. Mesopleura with a black peck. Legs concolorous with the body, the femora and tibiae with each a narrow longitudinal pale brownish line; some spines of the tibiae at the bases brownish. Abdomen concolorous with the body, the genital valve scarcely shorter than the foregoing segment, the genital plates nearly 25 times as long as the valve, both tapering acutely towards the apices, with a few paler bristles. Length, 3.5 mm. (incl. tegm.).

Hab.—Kotosho. One male specimen is in the collection.

***Athysanus jamianus* n. sp.**

♀. Closely allied to *A. onukii* MATS. from Japan, but differs from it as follows:

At the transit between the vertex and frons with a transverse wavy black line, which continues to the same coloured boundary line of frons; just above it with 2 small fuscous bars situated obliquely. Frons with about 8 transverse black arcs on each side, most of them at the inner side reaching to the longitudinal black line; the margins of lora and clypeus, a medial line of the latter, a spot in the cheek and a longitudinal line at the inner side of eye black; legs pale testaceous, a spot near the apex of the anterior femur and a cross-bar near each apex of the middle and posterior femora as well as the longitudinal lines of tibiae black. Body beneath largely black, the connexivum being mostly saffron yellow; the last 2 ventral segments of abdomen testaceous, the last one about twice longer than the foregoing, at the hind margin broadly excavated, in the middle black, the lateral lobes angularly produced posteriorly; pygophor with short brownish bristly hairs, the ovipositor black, at the apex testaceous. Length, 5 mm. (incl. tegm.).

Hab.—Kotosho. 3 female specimens were collected.

***Thamnotettix kotoshonis* n. sp.**

Body entirely deep green. Vertex long, parabolically produced. Face with no marking. Pronotum not quite twice longer than the vertex in the middle. Mesonotum with 2 longitudinal oblong darker markings. Tegmina whitish olivaceous, subhyaline, much longer than the abdomen, no marking, the veins obsolete. Legs green, the anterior tibia and the apical bristles of the

hind tibiae brownish.

♂. Abdomen with the genital valve semicircular, about as long as the genital plates, the latter with each a filamentous white appendix at the apices.

♀. Abdomen at the venter somewhat shorter than the pygophor, the last segment at the hind margin straight, the ovipositor somewhat protruding beyond the pygophor. Length, 3 mm. (♂), 3.5 mm. (♀) (incl. tegm.).

Hab.—Kotosho. 2 (1 ♂, 1 ♀) specimens were collected.

***Thamnotettix botelensis* n. sp.**

Pale greenish yellow. Vertex paler near the hind margin, on each side with a brown speck; in the disk with a transverse brownish stripe, near the anterior border decorating with \wedge -shaped fuscous marking; ocelli white. Frons brownish, no transverse marking, at the apex paler, the antennal groove fuscous; pronotum as long as the vertex, at the hind margin somewhat fuscous. Tegmia subhyaline, no marking, with a shade of olivaceous tinge, the veins white, not conspicuous. Abdomen at the dorsum fuscous, at each hind margin of the segments testaceous; at the venter concolorous with the body, the last segment distinctly longer than the foregoing, at the hind margin straight; pygophor nearly as long as the venter, near the apex with a short fuscous line; ovipositor black, at the suture narrowly testaceous. Length, 3.5 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen was collected.

This species somewhat resembles *Th. tobae* MATS. from Japan.

***Balclutha botelensis* n. sp.**

Closely allied to *B. viridis* MATS. from Japan, but differs from the latter as follows:

Body pale olivaceous green, beneath grayish white. Vertex at the hind margin on each side with a very small darker ring-spot. Pronotum about 2.5 times as long as the vertex in the middle. Tegmina grayish white, scarcely with a grayish tinge at the costal and hind margins, the veins white. Legs whitish, the claws fuscous. Abdomen yellowish, at the dorsum darker, at the hind margin of each segment paler; at the venter with no marking, the last segment nearly as long as the foregoing, at the hind margin straight; pygophor with short bristles, the ovipositor distinctly protruding beyond the pygophor, concolorous with the venter. Length, 4.2 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen was collected.

***Zygina botelensis* n. sp.**

♂. Brown, at the underside testaceous. Vertex in the middle somewhat

shorter than the latitude between the eyes, with no marking. Face paler than the vertex, at the sides and at the apex of clypeus somewhat brownish. Rostrum at the apex scarcely brownish. Pronotum at the anterior and the lateral margins somewhat paler, in the middle with an obsolete transverse curved darker band; mesonotum at the hind margin paler. Tegmina grayish, subhyaline, at the margin narrowly brownish, the veins white, obsolete. Legs whitish, the claws fuscous. The last ventral segment of abdomen at the hind margin straight; genital valve indistinct, the genital plates long triangular, towards the apices linear, at the extreme apices blunt, upturned; lateral lobes of the last dorsal segment rounded. Length, 3 mm. (incl. tegm.).

Hab.—Kotosho. One male specimen was collected.

In form and colour this species resembles *Z. formosana* MATS., but lacks fuscous spots on the mesonotum and the white patch on the costa of tegmina.

***Zygina kotoshonis* n. sp.**

Closely allied to *Z. maculifrons* MELICH., but differs from the latter in the following points:

Body whitish gray, in the middle with a large transverse semicircular black patch, its straight margin being situated at the anterior part; face pale brownish, with no marking, the clypeus largely brownish. Pronotum somewhat longer than the head, near the anterior margin transversely constricted; mesonotum on each side with a large black patch. Tegmina subhyaline, with a grayish tinge, at the costal and dorsal margins very narrowly brownish, the veins obsolete. Wings whitish, with brownish veins. Legs testaceous, the claws being fuscous. (Abdomen defect). Length. 2.5 mm. (incl. tegm.).

Hab.—Kotosho. One specimen was collected.

This is a very conspicuous insect with a very large macula on the vertex, differing from any other known species.

FAM. *FULGORIDAE*

***Myndus kotoshonis* n. sp.**

♀. Yellowish brown. Vertex near the apex with a deep fovea; frons with the keels paler. Pronotum whitish gray. Mesonotum at the posterior third paler, at the hind angles narrowly whitish testaceous. Tegmina hyaline, with some fuscous maculae, the costal vein brownish, the hind margin whitish, the veins concolorous with the tegmina, very finely granulated, with very short testaceous hairs. Legs concolorous with the body, the anterior legs darker in colour. Abdomen fuscous, at the lateral sides and at the base testaceous, the

hind margins of the segments white; the last segment at the hind margin slightly broadly excavated, being distinctly shorter than on the sides; ovipositor fuscous, towards the apex scarcely paler. Length, 4 mm.

Hab.—Kotosho. One female specimen was collected.

This species is the first one of the genus from the Oriental region, resembling somewhat *M. musivus* GERM. from Europe.

***Vekunta atripennis* n. sp.**

Head and pronotum dark brown; mesonotum black. Face and body beneath testaceous, the lateral sides of head before the eyes testaceous except the hind margin which is fuscous; extremely narrow edges of the keels and the space between the keels brownish. The outer sides of pronotum broadly testaceous, their margins narrowly fuscous. Mesopleurae fuscous. Tegmina twice longer than the body; fuscous, with the veins black, towards the apices somewhat paler; the anterior branch of the 2nd sector forked nearer to the apex than to the middle. Wings grayish, the veins black. Legs testaceous, the apices of tibiae and the apical half of tarsi to the hind legs black. Abdomen black, at each ventral segment broadly testaceous; the last 3 ventral segments black, at the hind margins of the 3rd and 4th testaceous, the genital valve rectangular, at the apex rounded, the pygophor about $\frac{1}{2}$ protruding beyond the valve, together sharply conically pointed and brownish in colour. Length, 7 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen was collected.

This species somewhat resembles *V. malloti* MATS.

***Vekunta botelensis* n. sp.**

♂. Chestnut brown, beneath testaceous. Vertex brownish, the transverse keels testaceous. Face between the keels reddish yellow, the extreme edges of keels narrowly fuscous. The apex of rostrum not infuscated. Mesopleurae fuscous. Tegmina about twice as long as the body, subhyaline, somewhat infuscated, forked at the base. Legs testaceous, the apices of tibiae and the middle as well as the apex of each tarsus black. The genital valve of abdomen rectangular, at the apex rounded, the genital plates at the apices enlarged and rounded, at the inner margin being incurved, together enclosing a semicircular space. Length, 8 mm. (incl. tegm.).

Hab.—Kotosho. One male specimen is in the collection.

This species resembles *V. atripennis* MATS.

***Vekunta kotoshonis* n. sp.**

Closely allied to *V. nigrolineata* MUIR from Horisha, but differs from the latter as follows:

Body pale testaceous, the keels of face fuscous. Mesonotum ochre-yellow, at the hind lateral ridges somewhat infuscated. The pro- and metapleural black spots oval. Rostrum at the apex black. Tegmina nearly twice as long as the body, at the costal and hind margins broadly infuscated, the veins white except at the extreme apices which are fuscous; from the tip of clavus the fuscous band becoming somewhat paler to the apex; the costal band interrupted at the apex of the costal cell and the inner end of the outer half extending to the apex of the cubital cell; no marking in the corium. Wings subhyaline, the outer half of the costal and hind margins as well as the medial veins somewhat infuscated. Legs whitish, with no marking.

♀. Abdomen at the dorsum infuscated, the last ventral segment reddish; the genital valve about twice as long as the breadth at the base, narrowed towards the apex and rounded; the genital plates somewhat protruding beyond the valve and at the apices with each a brownish spine.

♂. Differs from the female as follows: Body somewhat darker in colour; mesonotum on each side broadly infuscated; tegmina opaque, infuscated beyond the costal cell, the costa before the apex subhyaline, white, the veins whitish gray. Wings infuscated. The last ventral segment of abdomen distinctly broader than long, at the hind margin truncated; genital plates long, nearly 3 times as long as broad, at the basal two-thirds narrower, when closed together presenting an oblong space between them; at the apex broadly rounded, their inner margins turned inwardly. Length, 5 mm. (♂), 6 mm. (♀) (incl. tegm.).

Hab.—Kotosho. Numerous specimens were collected.

***Rhotana coccinea* n. sp.**

♀. Carmine-red; lateral margins of genae, teglae and tegmina white. Antennae grayish. Rostrum white, at the apex fuscous. Tegmina hyaline, the veins concolorous, with scattered fuscous spots, the cross-veins and the forks of veins mostly carmine-red, at about two-thirds from the base on the junction of corium and membrane with a transverse grayish band; along the apical margin with a series of obsolete grayish spots and at the extreme margin slightly reddish. Legs white, the fore and middle tibiae and tarsi as well as the hind tarsi broadly reddish. Genital segment testaceous, the last ventral segment large, nearly covering the pygophor, at the hind margin rounded; pygophors at the apices together building a blunt cone. Length, 4.5 mm. (incl. tegm.).

Hab.—Kotosho. One female specimen is in this collection.
In marking this species comes near *R. fuscofascia* DIST. from Ceylon.

***Mimophantia kotoshonis* n. sp.**

Closely allied to *M. maritima* MATS., but differs from it in the following characters:

♂. Body somewhat infuscated. Vertex with white keels, somewhat longer, acutely produced; face narrower, fuscous marmorated, scarcely convex and acuter so as seen from the sides, the central keel higher; genae beyond the eyes more acuminate, with 2 broader separated fuscous lines. Tegmina hyaline, white, the marginal cross-veins spotted with fuscous, the marginal vein nearly colourless, with a broad fuscous stripe from the middle to near the apex; the costal membrane nearly in the same breadth from the base to the apex. Abdomen fuscous, the last ventral segment and the genital plates narrower. Length, 6 mm. (incl. teg.).

Hab.—Kotosho. One male specimen was collected.

***Atracis kotoshonis* n. sp.**

In form and colour this species is allied to *A. indica* Wk. from Ceylon, but differs from the latter as follows:

♂. Body marmorated with dark brown. Vertex between the eyes with a transverse carina, the frons pentagonal, at the apex narrowly rounded, with the anterior lateral angles not prominent, with no marking; before the clypeus deeply excavated, the clypeus wanting any marking. Pronotum on both sides and mesonotum in the middle deeply excavated, not granulated, on both sides and near the apex spotted with fuscous. Tegmina near the base deeply excavated, the costal membrane gradually narrowed towards the apex, with no transverse fuscous fascia just beyond the latitude of the posterior angles of mesonotum; at the region of the first longitudinal vein before the furcation with a large globose elevation, scattering here and there numerous fuscous specks especially on the costal membrane and the discoidal region, building not any conspicuous marking. Abdomen pale brownish. Genital plates twice as long as wide taken together, at the inner side not closed, at the outer side strongly keeled from the middle on, so as seen from the sides strongly excavated and at the apices hook-like incurved. Length, 6 mm. (incl. tegm.).

Hab.—Kotosho. One male specimen is in this collection.

***Sogata jamiana* n. sp.**

♀. Fuscous; keels of the frons scarcely paler in colour; keels of the clypeus,

and the rostrum testaceous, the latter at the apex fuscous. Antennae with the granules white. Keels of the pronotum and mesonotum concolorous with the body. Tegmina subhyaline, with a pale brownish tinge, the veins brown, the granules concolorous, with each a very short white hair. Metasternum pale testaceous, at the sides near the base yellowish red. Legs whitish testaceous, the tips of spines mostly fuscous. Abdomen fuscous, at the lateral margins checked with testaceous; pygophor and ovipositor paler than the abdomen. Length, 3.5 mm. (incl. tegm.).

Hab.—Kotosho. 2 (♀ ♀) specimens were collected.

In form and coloration this species much resembles *Dicranotropis fumosa* MATS. from Rinkiho (Forniosa), which differs from the former in having a long forked central keel at the frons.

***Liburnia kotonis* n. sp.**

Head brown, the vertex paler, the antennae and the clypeus fuscous, the rostrum testaceous. Thorax and tegulae black, the pro- and mesonotum on the disk with each a broad longitudinal white stripe, which becomes broader towards the apex of mesonotum. Pectus largely testaceous, pro- and mesonotum being black, the metapleura with a fuscous spot. Tegmina subhyaline, the hind half of membrane tinged with pale brown, the veins brownish, those of the membrane broadly suffused with smoky gray; all the veins very obsoletely granulated. Abdomen largely black, with testaceous spots. Legs testaceous, the anterior and middle coxae black, on both ends being white.

♂. Genital segment pale brownish, the anal style short and fuscous in colour; hind margin of the genital segment in the middle with a short spinous projection; genital style fuscous, lamellate, somewhat longer than the central spine, at the apices suddenly pointed; below the anal tube with a short spine; genital opening circular in outline, its lateral margins being broadly white.

♀. Pygophor and ovipositor testaceous, the anal tube on the dorsum largely fuscous and the anal style also fuscous. Length, 3.5 mm. (♂), 4 mm. (♀).

Hab.—Kotosho. 3 (1 ♂, 2 ♀ ♀) specimens were collected.

***Dicranotropis botelensis* n. sp.**

♂. Grayish testaceous, with no marking. The fork at the apex of frons very narrow, its end nearly reaching to the lower end of eye. At the apex of the first joint of antenna with a fuscous ring. Tegmina subhyaline, with a pale testaceous tinge, the veins brownish with very fine granules and hairs, at the membrane the veins being broadly suffused with grayish brown. Mesopleura

with a brownish spot. Abdomen on the lateral sides of dorsum somewhat brownish. Genital segment at the lower half brownish, the hind margin of the genital opening transversely oval, the styli broader at the bases, widely diverging from each other and at the apices backwardly pointed and somewhat converging to each other; at the hind margin below roundly excavated; in the middle below the anal tube with 2 slender spinous projections above, at the apices somewhat diverging from each other. Length, 2.5 mm. (incl. tegm.).

Hab.—Kotosho. One male specimen is in this collection.

***Dicranotropis jamiana* n. sp.**

Closely allied to *D. botteensis* MATS., but differs from it as follows:

Body somewhat slenderer, grayish in colour. Vertex fuscous, the keels somewhat paler. Frons at the anterior half somewhat darker. The lateral keels and the anterior margin of pronotum fuscous. Tegmina subhyaline, tinged with gray. Abdomen fuscous, at the venter largely brownish.

♂. The hind margins of the ventral segments white; genital segment pitchy black, so as seen from behind higher than broad, the styli at the apices brownish, sharply pointed, at the bases rightangularly situated to each other; anal tube with the style white, with no spinous appendage below it.

♀. Mesonotum ochraceous, the keels and the same of pronotum paler. Abdomen brown, on the lateral sides of dorsum with each a longitudinal series of white spots; ovipositor on the sides infuscated. Length, 3 mm. (♂), 3.5 mm. (♀).

Hab.—Kotosho. 5 (2♂♂, 3♀♀) specimens were collected.

***Jamiphax* (n. g.) *kotoshonis* n. sp.**

♀. Dark brown, beneath black, the face brownish, the keels and antennae paler, the central keel of pro- and mesonotum as well as the hind margin of the latter white; the hind part of mesonotum brownish. Tegmina subhyaline, at the anterior margin brownish, the membrane slightly yellowish, the veins concolorous with the tegmina, granulated with black, at the junction of corium and membrane with a broad black band, which continues as a bow-band along the hind margin to the apex, and together presenting there a semicircular ring; in the apical hyaline region with 2 scarcely incurved oblique black bands, which run upon the 2nd apical vein and the outer branch of the 3rd. Legs black, the femora brownish, at the bases of tibiae testaceous. Metanotum and the basal part of abdomen at the venter testaceous, the metapleura with a black spot. Pygophor dark brown, with very short grayish hairs, the ovipositor being pale brownish. Length, 9 mm.

Hab.—Kotosho. One female specimen was collected.

***Jamiphax* n. g.**

Closely allied to *Dicranotropsis* FIEB., but differs from it as follows:

Vertex shorter than the pronotum, with a deep foveae at the apex; the central keel of pronotum sharply defined; the lateral keels of mesonotum parallel to the central one. Frons granulated, at the valleys excavated, much longer than the latitude between the eyes; the frontal fork of the central keel reaching beyond the middle of frons, being parallel to each other except at the angle. Antenna longer, slenderer, cylindrical, reaching near the tip of clypeus, the first joint more than thrice longer than its diameter, the 2nd distinctly longer than the 1st, becoming gradually broader towards the apex, being scarcely granulated. Veins of the tegmina strongly granulated, the 2nd and 3rd apical veins branched from the 4th. Anterior tibiae broadly lamellate, broader than the femora, in the middle with a strong longitudinal keel.

Genotype—*Jamiphax kotoshoni* MATS.

DESCRIPTION OF A NEW *APANTELES*-SPECIES
BRED FROM *DICTYOPLOCA JAPONICA* BUTLER

(HYMENOPTERA : BRACONIDAE)

By

CHIHISA WATANABE

(渡邊千尚)

***Apanteles dictyoplocae* sp. nov.**

♀. Black; antennae dark brown, the scapus rufo-testaceous basally; tegulae dark brown; palpi and tibial spurs pale; wings hyaline; stigma and veins dark brown; legs rufo-testaceous, all the coxae black; hind legs with the upper trochanters, the femora at the extreme apex, the tibiae on the apical third and the tarsi fuscous; abdomen on the basal ventrites somewhat testaceous.

Head minutely punctate, face with a weak median longitudinal ridge; posterior ocelli nearer each other than to the eyes; antennae filiform, a little